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AUTHOR Roderick, Jessie A.
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ABSTRACT

The Involvement Instrument, an observational technique for examining children's interaction patterns and degree of involvement within the school setting, is presented in this paper. Training protocols for obtaining skill in using the Involvement Instrument, methods of analyzing data obtained by using the instrument, and criteria for determining inter-observer reliability when using the technique are also included. The Involvement Instrument is reproduced in its entirety, including extensive descriptions of verbal and nonverbal behavior categories to be observed (with appropriate examples) and coding sheets. Behaviors are coded sequentially. A final section suggests possible uses for the Involvement Instrument (e.g., to determine how a child's indicators of involvement vary with different activities and times of day). (ED)

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Center for Young Children
Occasional Paper Fifteen

THE INVOLVEMENT INSTRUMENT

Jessie A. Roderick

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Center for Young Children
University of Maryland
College Park
July 1975

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PREFACE

Frequently trapped into mindsets which discern primarily the paraphernalia and artifacts of schooling and living, teachers, and indeed many individuals, lose sight of the person. The "things of teaching" may be highly important to those responsible for classrooms or for individuals, but it is only when persons are highlighted and the sea of artifacts is seen in perspective can personalized, humane, and uplifting encounters take place between person and person.

The Center for Young Children, a research unit of the University of Maryland, has been committed to developing knowledge which gives ever increasingly discerning, wise, and perceptive modes of observing children in their settings. From this information, the Center has attempted to develop contexts which indeed highlight the individual within the setting rather than the reverse.

In the search for more sensitive ways to allow the young to develop, the Center has conducted a number of studies and recorded certain of its curricular practices. The study which follows is one such effort.

Asking questions such as: With what and whom does an individual become involved? Why does he become involved? Is the involvement a worthwhile one? By whose criteria is the involvement evaluated? and How can we tell when the individual is involved , Professor Jessie Roderick, with the assistance of a number of graduate students, delved into these very significant questions. One partial answer to certain of the questions is found in the Involvement Instrument on the pages which follow. Stripped of the hundreds of hours invested by many in detailed observing, thinking,

recording, rethinking, deliberationg alone and in concert, writing, checking, developing, the Instrument is presented as it is at the time of this writing. In addition, some training materials are included so that persons who wish tc utilize the instrument may do so.

Appreciation is due Professor Roderick, on behalf of those of us who worked with her, for her willingness to tackle an extremely intricate but significant problem. The sessions which led up to the creation of the present instrument and the behind-the-scene work of her and graduate students dealt with topics and issues which were frequently confounding and perplexing. If persons, however, will use the Involvement Instrument in planning for classrooms and other settings, the ramifications for constructive change in persons are limitless.

--Louise M. Berman
Professor and Director
Center for Young Children;
Department of Administration,
Supervision, and Curriculum

July 1975

INTRODUCTION

To generate knowledge is a responsibility and a privilege that belongs to all--teachers, supervisors, curriculum persons, researchers, and children and youth of all ages. It is in this spirit that Occasional Paper Number Fifteen describing an instrument designed to note certain qualities of involvement is presented. The Involvement Instrument and accompanying materials are the result of knowledge-generating efforts of persons associated with the Center for Young Children during the last several years. In turn, the purpose of the Instrument is to facilitate further generation of knowledge--knowledge related to the development of life processes as they occur in the classroom setting or any setting in which persons interact with the "what" and "who" in their environments.

Following an overview of the Involvement Instrument, the Instrument and directions for using it are presented. Next are training protocols for obtaining skill in using the Instrument, and additional information pertinent to the Instrument. The latter includes the results of an inter-rater reliability check. Finally, selected references are offered for further background and study.

The Involvement Instrument and the accompanying training protocols are the result of collaboration in the best sense of the word. Ideas, effort, time, and concern were the contributions that many so freely gave in the long, arduous, often perplexing procedures of developing, revising, and revising again.

Special thanks are due Louise M. Berman, Director of the Center during the years in which the Instrument was developed and tested. Her ideational

input and the strong support system she provided, a combination rarely found, were major contributions to the work of the project. Appreciation is also due the children attending classes in the Center and their teachers.

Graduate Assistants and students who studied in the Center assumed leadership and participated in many phases of the project. To Barbara Littlefield, Jeanne Flurkey, Mildred Kreider, Diane Lee, Steve Kallmyer, Tim Muzzio, Pat Roach, and Joan Wilson go sincere thanks for the initiative they took and leadership they assumed in planning and executing the project. Their questions prompted much needed rethinking, reexamining, and revising. The work of many graduate students throughout the duration of the project is also recognized and gratefully acknowledged.

The hope and intent of those who participated in the project is that the work reported in this Occasional Paper will serve to heighten interest and efforts in exploring the process of becoming involved.

--Jessie A. Roderick
Associate Professor and
Associate Director
Center for Young Children
Department of Early Childhood-
Elementary Education

OVERVIEW OF THE INVOLVEMENT INSTRUMENT

Underlying the development and use of the Involvement Instrument is the assumption that it is important for children, youth, and adults to have the opportunity, the setting, and the skills to become committed to interactions that hold meaning for themselves and others. It is further assumed that persons repsonsible for what happens in classroom settings need to provide contexts in which children and youth can become involved, in varying degrees depending on the individual and the activity, in significant interactions. The purpose of the Involvement Instrument is to provide a means for persons to describe overt manifestations of the inner process of involvement which may lead to commitment. The Instrument is one attempt to deal more objectively and precisely with inferences that cannot be avoided when generating information about inner processes.

In the above context, involvement relates to the degree of investment of self that an individual brings to an interaction with other persons and/or materials. Overt nonverbal indicators of involvement as here defined include motions and vision related to task, changes in facial expression, and changes in stance. The amount of time a person remains at an interaction as well as how often he returns to it are also indicators of a person's involvement. In addition, the <u>degree</u> to which a person appears to be involved in an interaction as indicated by ratings of physical display of emphasis and preciseness evidenced in motions is also considered an indication of his investment in an activity.

The range of indicators of involvement identified above is not complete. Other indicators such as verbal statements could provide checks on nonverbal indicators. Additional information might be obtained by

asking persons to keep diaries or to reflect on their interactions either in writing or orally.*

*The intent of this paper is to present the Involvement Instrument and training protocols for its use. Persons interested in further reading about either the rationale for or the development of the instrument are referred to the Selected Bibliography at the end of this document.

THE INVOLVEMENT INSTRUMENT

The Involvement Instrument which follows consists of category definitions or descriptions with appropriate examples and a coding sheet. Following the Instrument are directions for using these coding sheets. Sample entries on a coding sheet are presented in Figure A.

INVOLVEMENT INSTRUMENT

CATEGORY	DEFINITION AND DESCRIPTION	EXAMPLES
Context	Context can be described in terms of the following elements in the setting:	
	1. age of the group or type of class	3-5 yr. olds; preschool
	2. teacher or leader role	directive, non-directive, initiating or responsive behavior
	3. space--(a) placement of persons in the setting; (b) use of space by persons; and (c) size of space areas	large open area; centers defined by furniture arrangement; persons in small clusters around the room
	4. prominent or unusual features of the setting	visitor in the classroom; theme pervading all activities
	5. time framework--time of day; time scheduling	snack time; free choice time; large block of time
	6. observable changes in any of the above	class moves to playground; teacher role changes
	7. other features specific to your research question	special equipment, materials, furniture arrangement, or grouping of persons
Activity (task)	An Activity exists when the following three criteria are met:	
	1. evidence exists of interaction between the observed person and another person(s) and/or materials;	observed person working with puzzle

CATEGORY	DEFINITION AND DESCRIPTION	EXAMPLES
	2. evidence exists to indicate that the observed person is giving priority to selected material(s)/ person(s) from within the context;	directs attention to puzzle even though other persons move in and out of puzzle area
	3. evidence exists of employment of parts of the body and/or senses,	manipulating pieces with fingers and hands
Alternate Activity	An Alternate Activity is characterized by behavior that does not fit the Activity definition.	dancing alone, talking to oneself, running, meandering, etc.
Motion	Motion is defined as movements of the body as a whole and/or parts of the body. Note: Motion is recorded by using the sub-categories that follow. Each is identified by a subscript.	crawl, throw an object, raise an arm
	M_T--Motion on task or related to task (activity)	stirring (when Activity or task is cooking); turning the page (when Activity is reading)
	M_{T_P}--Motion related to task with person(s)	showing someone how to do a finger play or dancing with a partner
	M_{T_M}--Motion related to task with material(s)	typing on a typewriter
	M_{T_B}--Motion related to task with both person(s) and material(s)	constructing a collage in collaboration with other person(s) or showing picture to teacher or peer
	M_A--Motion unrelated to task or Activity	turning away from a task and

CATEGORY	DEFINITION AND DESCRIPTIONS	EXAMPLES
	M_{A_P}--Motion unrelated to task with person(s)	reaching out during parallel play or other solitary activity to pat, push, or kick another
	M_{A_M}--Motion unrelated to task with material(s)	while working at clay table, subject reaches over to water table and pushes boat
	M_{A_B}--Motion unrelated to task with both person(s) and material(s)	while working with clay, subject passes paint to another person
	M--Motion that cannot be identified as related to previous or emerging tasks; "comfort motions"	shifting a leg
Pause	Pause is defined as a person's temporary cessation of an Activity or a condition in which voluntary gross movements of the body stop. There is an expectation that the Activity or Alternate Activity will continue after the pause.	stops running for a few seconds and then continues
Vision	Vision is attention of the eyes as demonstrated by eye movement or eye position. Also included is head movement associated with eye position (head movement often facilitates or makes eye movement possible).	
	Subscripts:	
	V_T--eyes focused on task (Activity); vision may by directed toward person(s) or material(s)	looking at puzzle pieces when activity is putting puzzle together
	V_A--eyes directed away from task	looking up or away from a task

CATEGORY	DEFINITION AND DESCRIPTIONS	EXAMPLES
	V--eye attention cannot be judged V_T or V_A	looking around while dancing, rolling the eyes, widening of the eyes, etc.
Stance	Stance is defined as any change in whole body position.	sitting down, kneeling, standing up, or squatting which lasts more than a fleeting moment
Facial	Facial is defined as any change involving the total face or parts thereof not included in Vision. Mouth movements accompanying speech are also excluded.	movement of the lips, tongue, nose, forehead; biting lips, turning down the lip
Preciseness	Preciseness is indicated by evidence of restrained, controlled body movements or withholding of force resulting from the following:	
	1. delicate or careful manipulation of material(s)	placing small amounts of glue on a light fragile material
	2. careful or controlled interaction with person(s)	guiding a person's hand in writing
	Note: Preciseness refers to process not accuracy. Low, moderate or high rating is designated by 1, 2, or 3.	

CATEGORY	DEFINITIONS AND DESCRIPTIONS	EXAMPLES
Physical Display of Emphasis	Physical Display of Emphasis is defined as a display of force which may or may not be directed toward person(s) or material(s). It is a pushing out from the body as opposed to a holding back of force. Note: 1, 2, or 3 designates a low, moderate or high rating.	Indicators include muscular contractions, colorations, tremors as found when grasping the handle of a hammer while pounding or clenching a fist
Comments	Comments are explanatory notes, reactions or helpful suggestions. Also recorded are inferences made as they correspond to Vision.	Child is out of sight of observer. V_I--It appears that person looked away (inference).

Coding Sheet
Nonverbal Indicators of Involvement

Date / _____ Time _____ Subject # _____ Observer _____

In class _____
Video _____
Other _____

I	II	III	IV	V	VI	VII	VIII	IX
Context	Coding Signal	Activity	Motion $M, M_T, A, {}_{M,B,P}$ Pause P Vision V, V_T, A	Stance (✓)	Facial (✓)	Precise-ness 1,2,3	Physical Display of Emphasis 1,2,3	Comments

DIRECTIONS FOR USING THE INVOLVEMENT CODING SHEET

I. Materials needed to code nonverbal behaviors that appear to be related to involvement:

A. Coding sheet

B. Involvement Instrument which includes Category Definitions or Descriptions and Examples.

C. Cassette tape recorder and tape on which sequential numbers from one through forty are recorded at ten-second intervals.

D. Directions and the attached Figure A.

NOTE: 1) When a term is underlined on the direction sheet, please refer to the category definitions for its meaning and explanation of its use.

2) Whenever column numbers are cited, refer to Figure A.

II. Step-by-step Directions:

A. Before beginning to record, observe the setting and the person to be observed for approximately 5 to 15 minutes.

B. Provide the required information in the appropriate blanks at the top of the coding sheet.

C. Describe the Context in Column I.

D. Select on the cassette tape the number with which you wish to start coding and appropriately number the blocks in Column II on the coding sheet.

E. In Column III describe the Activity in which the person being observed is engaged. Each time a new Activity is observed, describe it in Column III. If an Alternate Activity is observed, place brackets ([_]) in the Activity column (Column III) and do not code in any other column. When the original Activity is resumed or a new Activity begun, describe it in Column III and code accompanying behaviors in the appropriate columns. It is important to record in the Activity column, along with a basic description of the Activity, who in addition to the observee is involved and who appears to be taking the initiative in directing the activity.

F. Record Motions (M), Vision (V), and Pauses (P) in Column IV with the appropriate coding symbol and accompanying subscript(s). Do not record REPEATED Motions or more than one sucessive M_A, M_{T_M}, M_{T_P}, or M_{T_B} in one ten-second interval unless the Motion is interrupted by a P or an observed change in the Motion subscript. For example, if one M_{T_B} if FOLLOWED by a different M_{T_B}, only record one M_{T_B}. However, if an M_{T_B} is followed by a P, and then the same M_{T_B} occurs again, it would be recorded as follows: M_{T_B} P M_{T_B}

The same rule holds for REPEATED Visions (V).

Record SIMULTANEOUS behaviors one next to the other in a horizontal line. For example, if Vision-on-tak (V_T) occurred simultaneously with a Motion-on-task toward materials (M_{T_M}), the coding would appear as V_T, M_{T_M} (See first Motion block in Figure A.) When a new Motion (M), Vision (V), and/or Pause (P) is observed, begin coding on a new horizontal line. Accordingly, there may be more than one horizontal line recorded in any ten-second interval. (See Coding block #11, Column IV in Figure A.)

When the subject's eyes cannot be seen directly, but from the head and body position and any other relevant cues, one can infer that the gaze is either on or off task, record the observation in Column IV and write V-I (I refers to inference) in the corresponding Comment column (Column IX).

If the observer desires, Vision-on-task (V_T) may be coded using additional subscripts to indicate Vision-on-task-toward-material (V_{T_M}) or Vision-on-task-toward-person(s) (V_{T_P}). Caution is advised in coding this information because it is highly judgmental.

G. Code Stance with a check (✓) in Column V whenever a change in Stance is observed.

H. Code any change in Facial expression with a check (✓) in Column VI.

I. Rate Preciseness of movements in Column VII using a 1, 2, or 3, to designate a low, moderate, or high rating. (The rating judgment is made by comparing the subject's observed behavior with his own behavior over a period of time.)

J. In Column VIII rate Physical Display of Emphasis with either a 1, 2, or 3 to designate a low, moderate, or high rating. (The basis for rating is the observed person's behavior compared with his behavior over time.)

K. In Comments (Column IX), record any inferences made as they correspond to Vision. Also write any additional comments, reactions, or helpful suggestions. If not able to code a behavior, make note of that fact in the Comments column. For example, if the person being observed is out of sight or if the observer's vision is blocked, note this in Column IX.

Groundrules

1. Record for eight, ten-second intervals then break for a self- or group-determined time period. During this time, additional notes may be made in the Context and Comments columns.

2. When not sure of a coding or rating, code or rate in the appropriate column if possible. In addition, record the symbol followed by an I in the Comment column. This indicates a high inference.

3. Make every effort to code from the observee's perspective.

Sample entries--
Not a complete recording

FIGURE A
Coding Sheet
Nonverbal Indicators of Involvement

Date 6/14/75 Time 10:05 Subject # 64 Observer dane

In class
Video
Other ✓ Beath

I	II	III	IV	V	VI	VII	VIII	IX
Context	Coding Signal	Activity	Motion $M, M_{T,A}, {}_{M,B,P}$ Pause P Vision $V, V_{T,A}$	Stance (✓)	Facial (✓)	Precise-ness 1,2,3	Physical Display of Emphasis 1,2,3	Comments
4- and 5-year old group Adults in a facilitative role with minimal direction Children in various interest areas moving freely...	5	Child pointing at easel. Child-directed	V_T M_{T_M}			2	2	
	6	solitary play. Another child standing near-	V_A		✓			furrowed brow and curled nose looks away V-T
	7	by watching. [ ]	—	—	—	—	—	—
	8					3	3	doing detailed work in corner of paper
	9			✓				
	10	—	—	—	—	—	—	child is out of sight
	11		V_{T_M} M_{T_M} V_{T_B} M_{T_P}					
	12							

20

15

TRAINING PROTOCOLS FOR INDICATORS OF INVOLVEMENT INCLUDED IN INVOLVEMENT INSTRUMENT

The involvement training protocols were developed to familiarize persons with categories in the Involvement Instrument. In order to utilize these protocols as presented, the individual must have access to a training tape. A copy of this tape is in the Educational Technology Center, College of Education, University of Maryland.[1]

Persons might also develop their own tape by utilizing the written material included in these training materials and in the Involvement Instrument Category Definitions and the Instructions for Using the Involvement Instrument Coding Sheet.

The term protocols as employed in this document refers to a representation of reality that illustrates an idea or concept. As with any protocol material they are not intended to replace the real situation but rather to supplement it and to better prepare the person for acting upon or functioning in the real situation.

Use of the Protocol Materials

An individual may use these protocols alone or with a group not familiar with the Instrument, or with someone who knows the categories. The order in which the several protocols is presented corresponds to the order in which the categories appear on the Involvement Coding Sheet. This provides a sequential build-up which tends to proceed from a macro-view of behavior and the classroom setting to more of a micro-view of

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[1] Persons wishing a copy of the tape entitled, Training Protocols for Indicators of Involvement should contact Mr. Doug McRoy at the Educational Technology Center, College of Education, University of Maryland, College Park, Maryland 20742.

behavior and how it is performed or exhibited. Although one cannot assume that looking at the larger setting is a less complex process, observation of it does require a somewhat different set of perceptual skills. An awareness and description of the larger context in which behavior occurs also facilitates the observer's consistently placing more specific behaviors within the broader context.

As suggested in the protocols, observers are encouraged where possible to do follow-up observations in live settings. The number of live observations is left for the individual to determine. An observer may also wish to return to the video tape to check his live observations. It is hoped that these materials will be used flexibly as needed.

Working with another person(s) while proceeding through the protocol sequence is of value. Discussion of observations and recordings and checks on live observations increase the user's understanding of the categories. Such discussion also brings into the open perceptual differences and similarities among persons.

Modifications

Since the Involvement Instrument might be used in a variety of settings and with different age groups, certain specific statements such as those relating to the elements of context can be revised. For example, instead of free choice time as designated on the training protocol, a stipulated subject such as science might be used in describing an element of context in a video tape of a high school classroom.

Persons using the Involvement Instrument and the accompanying training protocols are encouraged to analyze them critically in terms of their structure and in terms of their usefulness in specified contexts.

The author of the Occasional Paper would appreciate communications from persons utilizing the Involvement Instrument and protocols in terms of their use. Suggestions for revision would also be welcome.

Alternatives to Protocols Using Videotapes

Skill in applying the Involvement System can be achieved by working with protocols that do not include videotapes. A procedure similar to the one presented in the training protocols using videotape could be followed. In place of the videotape segments, written narratives would be used. The narratives could be achieved by describing interactions that occur in the classroom or on tape. Narratives from publications in which classroom interactions are described could also be used for coding practice.

Persons can also achieve skill in learning and applying the categories in the Involvement Instrument by superimposing the categories on a diary-fashion record or typescript. Two or more persons, after having studied the category definitions and the directions for coding, can work until they agree with each other's coding of the typescript.

Applying the categories to a written narrative is another way of coding even after categories are leanred. In this approach, codings are not made directly while observing, but of a later time on descriptive narrative obtained during the observation period.

Directions and Guidelines for Protocols

There are four training sequences in the protocols that follow. Each sequence consists of one or more segments. In general, each segment includes: 1) an initial statement which gives directions for observing the videotape and at times pertinent information about the category focus; 2) counter numbers designating where to Begin the tape and when to stop it or Pause;

and 3) the correct answer(s). Persons should read the initial statement before setting the tape at the Begin counter. The category descriptions and definitions as found in the Involvement Instrument should be available and referred to as one progresses through the protocols. It is recommended that the definitions and descriptions be studied prior to using the protocols as well as used as the protocols are worked through.

It takes approximately one hour to progress through the four sequences. More or less time may be required depending on such factors as how many persons are involved, familiarity with the Instrument, and the number of replays of segments or sequences. In places where space for recording answers is not provided, a separate paper can be used.

The counter numbers for Begin and Pause notations in each segment are approximate. They are provided as an aid in identifying the sequences and segments. Set the counter at 000 when beginning the tape. The sequence on context begins at 008. If necessary, adjust the counters at that point. It is possible to follow the segments even if the counters vary a few units from those on the protocol sheets.

A final note: In order to focus the camera on individual children, all options in the setting were not always shown on the tape. However, in the setting in which the tapes were made, many choices were available to the children. Interactions on the videotape were of the children's choice.

THE PROTOCOLS

SEQUENCE 1 CONTEXT

Observe the sequence which follows and either while you observe or during the pause describe in the space below the elements of context evident on the tape. (The elements of context to be identified are described on page 1 of the Involvement Instrument.)

Begin 008

Pause 048

Elements of Context Observed Between 008 and 048

You should have observed and noted at least the following elements of context:

- Preschool children
- Teachers available in a facilitative role with minimal direction and moving around as needed
- Relatively large space with activity areas such as listening with head phones, woodworking, and house corner defined by furniture placement and materials

-Most settings appeared to have been initially planned by adults.

-Some children moved freely from area to area

-Free choice time

For additional practice, observe a live setting or another videotape and describe the elements of context observed checking your observations with the definition of context and when possible with other persons.

SEQUENCE 2 ACTIVITY

Segment A.

The focus of observation in the next segment is a boy in a checked shirt with his back to the camera. He is seated at a table.

Using the three criteria for Activity as defined for the Involvement Instrument, describe the Activity in which the boy is engaged.

Begin 048

Pause 060

The Activity would be defined as the manipulation of graduated cylinders. (There is evidence of interaction between the boy and a material; evidence of his giving priority to the graduated cylinders; and evidence of employment of parts of his body--his hands.)

Segment B.

In the next segment, observe the cessation of the Activity involving the manipulation of graduated cylinders and the movement from the table to a new center of interest. The boy moves to the fish tank and kneels in front of it.

Begin 060

Pause 070

Did you note the cessation of the Activity involving the graduated cylinders and the movement toward a possible new Activity? The cessation of the prior Activity was signaled by the child's getting up from the table, leaving the graduated cylinders, and walking across the room to the acquarium.

Segment C.

In the next segment, observe the boy in a white pullover shirt. Using the criteria established, describe the Activity in which he is engaged.

Begin 070

Pause 077

The boy is using the sandbox in the presence of an adult.

Segment D.

The next segment is a continuation of the previous one. Observe the cessation of the stated Activity (using sandbox in presence of an adult) and the beginning of a new Activity. Using the three criteria, identify the new materials and/or persons with which the child is interacting.

Begin 077

Pause 099

Did you note the change in Activity? The child left the sandbox and ran to the acquarium. The new Activity is observing and feeding the fish.

Segment E.

In this segment, observe the boy in a printed, paisley shirt. Using the three criteria for Activity, identify the Activity in which he is engaged.

Begin 099

Pause 112

The boy is engaged in the Activity of making a collage using paper, paintbrush, glue, and pieces of fabric.

Segment F.

In this segment, observe the same boy as he ceases working on the collage, leaves the table, and walks or meanders around the room.

Begin 112

Pause 130

The child left the Activity of making a collage but his actions did not meet the three criteria for defining Activity. No evidence exists to indicate that the child is interacting with or giving priority to selected material(s) or person(s). The child is most likely in a transition period between activities. This behavior is described as Alternate Activity.

Segment G.

Observe the completion of the Alternate Activity or in this case the transition period. At the end of this sequence the boy goes to the book corner, picks up a book, and sits down with it.

This would be a new Activity as dictated by the three criteria for determining Activity.

Begin 132

Pause 146

Segment H.

The next segment begins with a child sitting on the floor. Follow this child as she engages in three different Activities. Using the Activity Definition Practice Sheet on page 26, describe in the appropriate columns evidence of criteria 1,2, and 3 for each of the Activities. The Activities are lettered A, B, and C, respectively, in the first column of the practice sheet.

Begin 148

Pause 200

Check your responses on the Activity Definition Practice Sheet with those below.

Activity	Criterion 1	Criterion 2	Criterion 3
A	-girl putting puzzle together	-works with puzzle parts most of time	-uses hand, fingers, focuses eyes on task
B	-girl places pegs in pegboard	-does not engage in other interaction at same time	-uses hands, fingers to manipulate pieces
C	-girl handles tinker toys and talks with teacher while looking at her	-interacts only with tinker toys and teacher	-uses hands and arms and lifts head to look at teacher and talk to her

Observe a person from an observation booth or in a classroom and use the remaining space on the Activity Definition Practice Sheet to gain skill in identifying and describing evidences of criteria 1, 2, and 3 for Activity.

SEQUENCE 3 MOTION

Segment A.

The category Motion refers to movements of the body as a whole and/or parts of the body. In the segment that follows, observe the boy in the white shirt and identify an example of Motion.

Begin 203

Pause 210

A Motion in this segment is the boy swinging the plastic banana. In the segments which follow different types of Motion or sub-categories are defined and directions for recording them given.

ACTIVITY DEFINITION PRACTICE SHEET

Criteria for Activity

1. Evidence exists of interaction between a person and another person(s) and/or material(s).
2. Evidence exists to indicate that the person is giving priority to selected material(s)/person(s) from within the context.
3. Evidence exists of employment of parts of the body and/or senses.

Activity	Criterion 1	Criterion 2	Criterion 3
A			
B			
C			

Segment B.

Continue observing the boy in the white shirt. Identify the Activity in which he is engaged and a Motion within that activity.

Begin 210

Pause 224

The Activity is play fighting and the Motion is using the banana as a sword and a gun. This Motion is Motion-related-to task (M_T).

Segment C.

In this segment observe for Motion that is not related to the task or Activity.

Begin 224

Pause 229

Did you notice the boy walking momentarily away from the scene of the play fighting that you observed in the previous segment? That Motion or movement is an example of Motion unrelated to the task or activity (M_A).

Segment D.

Motions-on-task or that are task related are also coded in terms of whether they are directed toward materials (M_{T_M}), persons (M_{T_P}), or both (M_{T_B}). In this segment observe for an example of Motion-on-task directed toward materials (M_{T_M}).

Begin 229

Pause 237

Pushing blocks down the slide was an example of M_{T_M}.

Segment E.

In the following segment two boys are engaged in the Activity of tussling. Watch for Motion-on-task with persons (M_{T_P}).

Begin 237

Pause 246

One boy pushing his arm against another boy's arm is an example of M_{T_P}.

Segment F.

Observe the boy in the white shirt and identify a Motion-on-task with both materials and person (M_{T_B}).

Begin 246

Pause 254

Swinging the plastic banana and aiming it in the direction of another child is an M_{T_B} or Motion-on-task with both material and person.

Note: Motion that cannot be identified as related to previous or emerging tasks or Activities is recorded M with no subscript. Comfort motions such as shifting a leg are examples of this type Motion.

Segment G.

The purpose of this segment is to provide additional practice in identifying and recording different types of Motion in the Involvement Instrument.

1. Using the Observation Guideline for Recording Motion on the next page, observe the boy in the white long-sleeve shirt as he moves from one Activity to another. Describe the Activities and code the Motions observed.

Begin 254

Pause 282

2. Check your responses with the recordings below.

Context	Activity	Motion
free play child-initiated activities 4-5 year-olds	table games with puzzles	M_{T_B}
	styrofoam cups & pieces in plastic tub	M_{T_M}
	/standing alone/	
	working with puzzle	M_{T_M}

OBSERVATION GUIDELINE FOR RECORDING MOTION

Context	Activity*	Motion M, M_T, M_A, M_{T_M}, M_{T_P}, M_{T_B}

*When the three criteria in the Activity definition are met, an interaction is identified as an Activity.

3. Record additional observations of a person on the remainder of the Observational Guideline for Recording Motion. You might observe from an observation booth, in a classroom, or other videotapes.

SEQUENCE 4 VISION, STANCE, FACIAL, PRECISENESS,

AND PHYSICAL DISPLAY OF EMPHASIS

Segment A.

In this segment, Vision is the focus of observation. Watch the boy in a white pullover shirt seated at the table. Note that his Vision is task-related or on-task (V_T) until the end of the sequence where his Vision changes to off-task (V_A).

Begin 285

Pause 300

Segment B.

Stance is the focus of this segment. Observe the girl seated. Note that towards the end of the segment she stands up. This is a change in Stance and would be recorded as such.

Begin 301

Pause 328

Segment C.

The focus of this segment is the category Facial. Watch for a change in facial expression as defined on the definition sheet. Towards the end of the segment, the girl turns down her lip. This would be recorded as a Facial change.

Begin 328

Pause 337

Segment D.

The focus of this segment is Preciseness. Observe the boy in the white shirt for a while. Note how carefully he applies the paste to the sheet. This is an example of Preciseness as defined on the definition sheet. The movement of applying the paste to the sheet would be rated high (3) on Preciseness.

Begin 337

Pause 367

Segment E.

This segment focuses on Physical Display of Emphasis. Observe the girl in the white shirt. Note the effort she is applying to the material. In this case, the Physical Display of Emphasis is rated low (1). In this segment the evidence suggests minimal display of force directed toward person(s) or material(s).

Begin 367

Pause 382

Note: Observe in a classroom or other settings for more pronounced evidence of Physical Display of Emphasis. Examples might include pounding a hammer, a scrubbing motion with a paintbrush on an easel, or kneading clay.

Segment F.

Observe the boy in the striped pullover shirt. (This segment is approximately 20 seconds in length.) Record as directed on the coding sheet below the categories you observed. You may record while you observe or after you have stopped the videotape at the Pause. If you record after the Pause, try to complete your recording within 20 seconds. (This will begin to familiarize you with timed coding.)

Remember that Vision is coded using the V and appropriate subscripts; Stance and Facial are recorded with a ✓, and Preciseness and Physical Display of Emphasis are rated 1, 2, or 3. The Activity is defined as working with straws and glue and talking with the teacher.

Begin 385

Pause 395

Practice Coding Sheet

Vision (V_T, V_A)	Stance ✓	Facial ✓	Preciseness 1,2,3	Physical Display of Emphasis 1,2,3

Your coding should look like the following:

V_T, V_A, V_T, V_A, V_T, V_A in that sequence;

A check in Facil corresponding to or opposite the second V_A recorded;

A check in Stance at the end of the sequence; and

A rating of 2 for all evidences of Preciseness and Physical Display of Emphasis.

Please Note! The above ratings were determined by coders who were familiar with the observed child and could compare his behavior in Segment F with his behavior over a period of time. A person using these protocols would not necessarily be familiar with the subject and therefore unable to arrive at the same conclusion. Examples on rating behaviors as presented in these protocols are offered as guidelines only.

Use the Involvement Instrument materials (directions, definitions, and coding sheet) to gain more practice in coding and rating. Observe videotapes or live actions from within classrooms or from booths.

POSSIBLE USES AND APPLICATION OF THE INVOLVEMENT INSTRUMENT

To date, the Involvement Instrument has been used as an aid in exploring questions such as the following:

How does increasing the complexity of a task affect involvement as described by the nonverbal indicators of involvment on the Instrument?

What is the relationship of facial change (Facial category) to the other categories in the Instrument?

How do a child's indicators of involvement vary with different activities and times of the day?

What is the relationship of behaviors related to involvement to aspects of the affective domain, such as valuing, feeling?

What is the relationship between teacher and child levels of involvement?

How does group size seem to affect the level of teacher involvement?

What are teachers' perceptions of students' nonverbal involvement behavior?

Additional questions which might be explored include:

What verbal expressions that indicate involvement can be identified? How might they provide checks on the validity of the nonverbal indicators in the Involvement Instrument?

How might teacher education programs provide settings for students to become involved to the degree that their commitments can be realized? In what ways can the Involvement Instrument be of use if teacher education programs gave serious attention to the involvements and commitments of teachers?

What indicators of involvement do the elderly evidence in different settings and situations? Of what value is this knowledge to persons working with the elderly?

What indicators of involvement do students with learning disabilities exhibit? How might this information be used in designing programs for these students?

Does involvement differ in situations where persons' contributions to the decision making process are maximal from those where they are minimal?

In which ways does knowledge of involvement as described in this paper contribute to one's understanding of the communication process?

Are interactions or activities for marginal as well as intense involvement provided in various types of school settings?

How can knowledge of involvement indicators encourage versitility of behaviors?

What kinds of involvement-encouraging activities do individuals need? In what ways can information be gathered as to whether activities persons think will maximize involvement do indeed maximize involvement?

The nature of the above questions implies that the Involvement Instrument or questions related to it are pertinent to all levels of schooling. This includes in-service and pre-service professionals and paraprofessionals. A person involved in curriculum development and research might want to use the Instrument in its entirety. The classroom teacher, student, or paraprofessional might select certain aspects of the Instrument for use in exploring questions of import to them. It is left for the person to make decisions as to how the Instrument will be used. The question being explored determines the procedures for generating knowledge.

ADDITIONAL INFORMATION PERTINENT TO THE INVOLVEMENT INSTRUMENT

In this final section are included comments on 1) procedures for examining and analyzing data generated by using the Involvement Instrument; 2) results of an inter-rater reliability check; 3) time required to gain skill in using the Instrument; 4) development of the Instrument; and 5) context--a crucial aspect of curriculum research.

Examining and Analyzing Data

The Involvement Instrument has been used to a large degree in developing and refining the categories, directions, and training protocols. However, individuals and research teams have used the complete instrument or parts of it in studies. Scoring procedures have generally included computing percentages of tallies recorded for the Motion, Vision, Stance, Pause, and Facial Categories. Ratings of Preciseness and Physical Display of Emphasis have been averaged.

Specific procedures for analyzing data are determined by the question being explored, the context in which it is explored, and equipment and skills at hand. However, it seems appropriate to caution that high percentages or frequencies on task-related Motion and Vision as well as rating averages approximating 3.0 on Preciseness and Physical Display of Emphasis not be seen as conclusive evidence of high involvement. Any reading on involvement, however determined, has to be interpreted within the context of the question, "Involvement with what and for what?" Also any quantitative statements need to be viewed within the nature of specific contexts.

Inter-observer Reliability Check

In order to determine inter-coder agreement, two pairs of observers each gathered data during two observation periods making a total of four observations. From an observation booth, observers independently coded the behavior of the same child. Observers coded and rated behaviors on Form A of the coding sheet designed for use with the Involvement Instrument (See Figure B.) Behaviors were coded and rated for a total of 128 ten-second time intervals or blocks. The number of agreed upon and non-agreed upon codings were tallied for each time interval on the coding sheets. Reliability coefficients for each category and all categories combined were computed by dividing the total codings on which the observers agreed by the total numbers of codings on which they agreed and disagreed.

The coefficients for each category and for the total observations are as follows:

Category	Coefficient
Motion (M, M_T, M_A)	.79
(M_M, M_P, M_B)	.78
Vision (V, V_T, V_A)	.77
Facial	.70
Preciseness	.74
Physical Display of Emphasis	.77
Total	.77

Prior to analyzing the data, it was agreed that any coefficient of .70 or above would indicate high reliability. The coefficients attained ranged from .70 to .79 which was interpreted as high inter-rater agreement.

FIGURE B

Coding Sheet (Form A)
Nonverbal Indicators of Involvement

In class _____
Video _____
Other _____

Date _____ Time _____ Subject # _____ Observer _____

I	II	III	IV	V	VI	VII	VIII
Context	Coding Signal	Activity	Motion $M, M_{T,A}, M, P, B$ Vision $V, V_{T,A}$	Facial (✓)	Precise-ness 1,2,3	Physical Display of Emphasis 1,2,3	Comments

The four coders who participated in these reliability sessions varied in the amount and depth of experience they had in working with the Involvement Instrument. Three coders had worked with the instrument in its different stages throughout the year. Persons who had not been as deeply involved in developing and revising the instrument and who used it in other studies also achieved respectable agreement. The latter suggests that long term involvement in the developmental processes of the Involvement was probably not prerequisite to achieving high inter-coder agreement.

The final form of the Involvement Instrument includes two categories not coded in these reliability sessions. The categories are Pause and Stance. Pause is a person's temporary cessation of an Activity or a condition in which voluntary gross movements of the body stop. There is an expectation that the Activity or Alternate Activity will continue after the pause. Stance is defined as any change in whole body position which lasts for more than a fleeting moment.

Time Required to Gain Skill in Using the Instrument

Since the experience of persons, the reasons for using the Instrument, and the nature of training protocols for the Involvement Instrument will vary, one can only estimate the amount of time required to be able to use the Instrument. Based on our experience, an estimate of two hours work on each category and two hours using the Instrument as a whole seems reasonable. This means approximately 20 hours which includes practice observations on one's own in the classroom, with tape, or from an observational booth. Some categories may require more or less time. Persons who have used selected categories from the Instrument have achieved sufficient skill in considerably less than 20 hours.

Development of the Instrument

An early study of decision making conducted in the Center for Young Children identified the need to explore more carefully nonverbal behaviors as possible indicators of the process of deciding. Building on this study, a research project was designed to identify and describe nonverbal behaviors that appeared to be overt manifestations of the inner process of deciding. In order to accomplish this task, the Pupil Nonverbal Category System was developed. Use of this sytem revealed the need to explore the category Feeling Expression or how a nonverbal behavior is expressed. It was during this exploration that a category instrument for identifying and rating nonverbal behaviors that appear to indicate the degree of investment of self a person brings to an interaction was developed.[2] Revisions of the earlier forms of this instrument resulted in the Involvement Instrument presented in this paper.

The basic steps followed in developing the Involvement Instrument were:

1) observing individuals in the classroom setting and focusing on their nonverbal behaviors

2) recording in diary-fashion the behaviors observed

3) analyzing the content of the recordings for nonverbal behaviors and how they were exhibited and deriving categories or groupings of the nonverbal behaviors and indicators

4) developing an observational system or guideline consisting of category descriptions or definitions and illustrative behaviors or in some instances illustrative points on a scale or continuum

5) developing coding sheets and directions for using them

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[2] For a description of the stages of development and procedures employed in deriving the Involvement Instrument see, Identifying, Defining, Coding, and Rating Nonverbal Behaviors that Appear to be Related to Involvement: Project on Involvement Interim Report No. 2, Center for Young Children Occasional Paper Number Twelve, 1973.

6) collecting data utilizing the category descriptions, directions, and coding sheets

7) analyzing the data collected (the analyses were by inspection, group discussion, and statistical methods)

8) revising procedures and materials where appropriate

9) developing training materials or protocols

10) testing revisions by observing interactions in the live classroom setting and on videotape

11) achieving inter-rater reliability

Context--A Crucial Aspect of Curriculum Research

Given that the person lives within a context that is constantly changing--partially determined by the person and partially by forces or conditions that the person cannot control--an awareness of the nature of context in various life situations is necessary for knowledge generation which in turn results in wise decision making. The Involvement Instrument was developed in human contexts that viewed the person as a self-directing, caring individual who moves beyond his personal interests to those of a wider more diverse community. Individuality and diversity were prized as well as collaboration or a sharing that took into account all persons and ideas.

Context was important in the shaping of the Involvement Instrument, for ordinarily knowledge advances in a community, not in isolation. The perceptions of students and faculty from various backgrounds and disciplines shaped the Involvement Instrument in a way no one individual could have.

The importance of context in this study was evident in another way. Understanding the complexity of human behavior as it occurs in the classroom or other natural settings requires a knowledge of the context in which that behavior is observed. The individual interacts with and acts upon

various contextual elements within a short period of time. Recognition of the importance of knowledge and understanding of context and a person's interaction with it prompted the inclusion of the Context category (Column I) in the Involvement Instrument. Judgments relative to coding other categories are often made in terms of the elements of context as described. Information about context gained in using the Involvement Instrument facilitates the work of those responsible for selecting or devising settings in which students perceive opportunities for interacting with other persons, materials, or ideas.

SELECTED BIBLIOGRAPHY

Barker, R. Ecological Psychology: Concepts and Methods for Studying the Environment of Human Behavior. Stanford: Stanford University Press, 1968.

Becker, Howard S., "Notes on the Concept of Commitment," American Journal of Sociology, Vol. 66, July 1960, Pp. 32-40.

Berelson, Bernard. Content Analysis in Communication Research. New York: American Book-Stratford Press, 1952.

Brophy, Jere E. and Thomas L. Good. Teacher-Student Relationships: Causes and Consequences. New York: Holt, Rinehart and Winston, Inc., 1974.

Budd, Richard W., et. al. Content Analysis of Communications. New York: The Macmillan Company, 1967.

Coller, Allan R. Systems for the Observation of Classroom Behavior in Early Childhood Education. Urbana, Illinois: ERIC Clearinghouse on Early Childhood Education, April 1972.

Jackson, Philip W. Life in Classrooms. New York: Holt, Rinehart and Winston, Inc., 1968.

Harrison, Randall P. Beyond Words: An Introduction to Nonverbal Communication. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1974.

Herbert, John and Carol Attridge. "A Guide for Developers and Users of Observation Systems and Manuals." American Educational Research Journal, Vol, 12, No. 1, Winter 1975, Pp. 1-20.

Kahneman, Daniel. Attention and Effort. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.

Pillsbury, Walter Bowers. Attention. New York: Arno Press, 1973.

Polanyi, Michael. Personal Knowledge: Towards a Post Critical Philosophy. Chicago, Illinois: The University of Chicago Press, 1958.

Raths, James. "Teaching Without Specific Objectives." Educational Leadership, Vol. 28, April 1971, Pp. 714-720.

Raush, H. L. and E. P. Willems (eds.). Naturalistic Viewpoints in Psychological Research. New York: Holt, Rinehart and Winston, 1969.

Roderick, Jessie A. (Principal Investigator). Identifying, Defining, Coding and Rating Nonverbal Behaviors that Appear to be Related to Involvement: Project on Involvement Interim Report No. 2. Center for Young Children Occasional Paper Number Twelve. College Park, Maryland: College of Education, University of Maryland, 1973.

Rosenshine, Barak and Norma Furst. "The Use of Direct Observation to Study Teaching," in Second Handbook of Research on Teaching, ed. R.M.W. Travers. Chicago: Rand-McNally & Company, 1973. Pp. 122-183.

Sarason, Seymour B. The Culture of the School and the Problem of Change. Boston: Allyn and Bacon, Inc., 1971.

Spiegel, John Paul. Messages of the Body. New York: Free Press, 1974.

Symposium on Communication and Affect, 1973. Nonverbal Communication. New York: Plenum Press, 1974.

Tomkins, Silvan A. "Part VI The Psychology of Commitment, Part I: The Constructive Role of Violence and Suffering for the Individual and His Society." Affect, Cognition, and Personality: Empirical Studies, eds. S. Tomkins and Carroll E. Izard. New York: Springer Publishing Company, Inc., 1965. Pp. 148-171.

Werner, C. Sue and Richard L. Simpson. "Attention to Task and Completion of Work as a Function of Level of Adjustment and Educational Environment." Journal of Educational Research, Vol. 68, No. 2, October '74. Pp. 56-58.

Weick, Karl E. "Systematic Observational Methods," in The Handbook of Social Psychology, Second Edition, Volume Two Research Methods, eds. Gardner Lindzey and Elliot Aronson. Reading, Massachusetts, Addison-Wesley Publishing Company, 1968. Pp. 357-451.

Weitz, Shirley. Nonverbal Communication: Readings with Commentary. New York: Oxford University Press, 1974.

Yamamoto, K., J. P. Jones and M. B. Ross. "A Note on the Processing of Classroom Observation Records." American Educational Research Journal, Vol. 9, 1972. Pp. 29-44.

Zahn, Gordon C. "The Commitment Dimension." Sociological Analysis, Vol. 31, No. 4, Winter 1970. Pp. 203-208.

CENTER FOR YOUNG CHILDREN PUBLICATIONS

1970-1975

MONOGRAPH SERIES, Louise M. Berman, Series Editor

Berman, Louise M., ed., and Staff. Toward New Programs for Young Children: Programs and Research Possibilities, Monograph 1, 1970, $2.25.

Horowitz, Sandra. Decision Making in Young Children: A Report of Research Findings, Part One, Monograph 2, 1971, $2.25.

Horowitz, Sandra. From Theory to Practice: A Personal Diary of a Teacher of Young Children, Monograph 6,* 1961, $2.00.

Leiserson, Marion. Creating a "Loving" Environment for Young Children, Monograph 4*, 1971, $1.00.

Poultney, Joan. Decision Making in Young Children: A Report of Research Findings, Part Two, Monograph 3, 1970, $2.25.

Roderick, Jessie with Joan Moyer and Ruth Spodak, Investigators. Nonverbal Behavior of Young Children As It Relates to Their Decision Making: A Report of Research Findings, Monograph 5,* 1971, $3.00.

OCCASIONAL PAPERS (When ordering, please indicate Occasional Paper and number.)

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Leiserson, Marion B. Helping Behaviors of Young Children: Identifying and Categorizing Ways Young Children Help Each Other, Occasional Paper Number Fourteen, 1975, $2.50.

Smith, Robert. A Program for Young Children Based on Process Skills: Examples of Practice, Occasional Paper Number Nine, 1973, $1.50.

Staff. Considerations in Selecting and Planning Classroom Activities, Occasional Paper Number Ten,* 1973, $ .50.

Stevenson, Carol A. The Development of an Instrument to Examine Teacher Influence on Decision Making Behaviors of Children Ages Three to Five, Excerpts, Occasional Paper Number Thirteen, 1973, $1.00.

Rancourt, Karen, A Study to Compare Quantitatively the Amount of Change in Facial Expressions of Pre-Schoolers and Kindergarteners in Situations Lacking Contact with Another Person and in Social Situations, Occasional Paper Number Five,* 1972, $1.00.

Roderick, Jessie (Principal Investigator), Identifying, Defining, Coding, and Rating Nonverbal Behaviors that Appear to be Related to Involvement: Interim Report No. 2, Occasional Paper Number Twelve,* 1973, $2.00.

Roderick, Jessie (Principal Investigator), Jacqueline Vawter (Associate Investigator and Author), and Others. A Category System to Describe the Nonverbal Behavior of Teachers and Students: An Interim Report, Occasional Paper Number Two,* 1972, $1.00.

Roderick, Jessie and Barbara Littlefield (Associate Investigator and Author), and Others, The Project on Involvement: An Interim Report, Occasional Paper Number Four,* 1972, $1.00.

Roderick, Jessie A. (Principal Investigator). The Involvement Instrument, Occasional Paper Number Fifteen, 1975, $2.00.

Roderick, Jessie A., Diane M. Lee, and Louise M. Berman. Observation: Basis for Planning, Implementing, and Evaluating, Occasional Paper Number Sixteen, 1975, $3.50.

Young, Dorothy. Exploration Into the Relationship Between Parent-Child Interaction and the Creative Abilities of Children, Occasional Paper Number Eight, 1971, $1.00.

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